

**ABSTRACT**

It is the objective of this invention to provide a multichannel digital filter bank  
5 circuit and a method implemented by cascading sub-filters of the recursive type  
suitable for graphically equalizing electrical signals received via a communication  
path. It is also an objective of this invention to produced equalized signals  
having minimal distortion of signal spectral characteristics including magnitude  
and phase. The circuit of this invention is implemented with cascaded  
10 connections of first order or second order digital filters. It is an additional  
objective of this invention to provide for the programming of the individual  
transfer functions of the above digital filters so as to produce  
unity gain. This unity gain case results in an output signal which is an exact  
replica of the input signal with no delay. This result indicates the minimal  
15 distortion introduced by the method of this invention.

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